

REMARKS

Favorable reconsideration of this application in light of the preceding amendments and the following remarks is respectfully requested.

No claims having been cancelled and claims 17 and 18 having been added, the Applicants respectfully submit that claims 1-18 are properly under consideration in this application.

Request for Withdrawal of Finality

The Applicants respectfully request that the designation of the present Action as FINAL be reconsidered and withdrawn. The Applicants note that the Examiner contends that “the Applicant’s amendment necessitated new ground(s) of rejection presented in this Office action.” Action at 6. The Applicants respectfully submit that:

- 1) no new grounds of rejection were necessitated by the Applicants’ amendments;
- 2) the newly presented Objections to the drawings for the first time take issue with the original disclosure and figures; and
- 3) the Examiner’s rejections were not sufficiently supported by Sillat’s Abstract and that the newly provided translation was required in order for the Applicants to have a full and fair opportunity to address the rejections based on Sillat.

Accordingly, the Applicants respectfully contend that the translated Sillat is effectively a “new” reference and that the present rejections based on this reference constitute rejections on newly cited art of claims not amended by Applicants. MPEP

§ 706.07(a). The Applicants respectfully contend, therefore, that the present Action may NOT properly be made FINAL.

The Applicants also respectfully contend that the delay in presenting the present objections to the original drawings in light of terms found in the original claims has limited the Applicants' options for addressing the objections under 37 C.F.R. § 1.116. The Applicants respectfully contend, therefore, that the present Action should not have been made FINAL.

The Applicants, therefore, request that the FINALITY of the present Action be withdrawn and the present response treated as a response under 37 C.F.R. § 1.111 rather than 37 C.F.R. § 1.116.

Objections to the Drawings

The drawings stand objected to as allegedly failing to illustrate every feature of the invention, particularly with respect to the "light emitting diode" of claims 2, 5, 12 and 16 and the "voltage signal" of claims 9 and 10. The Applicants respectfully traverse this objection for the reasons detailed below.

The Applicants respectfully submit that the drawings as filed illustrate both of these features and direct the Examiner's attention to reference numeral 608 in FIGS. 6 and 7, which is identified as the "active electrical component ... such as a light emitting diode." Specification, page 9, paragraph [0029].

The Applicants also respectfully direct the Examiner's attention to FIG. 3 which illustrates a path (dashed line) by which a "sensor 304" will send a signal via "signal line 312" indicating the presence of LN2 in the sensor that will allow the "control device 310

to react.” Specification, page 10, paragraph [0030]. This signal, in the case of an LED sensor, is a voltage. *Id.*

The Applicants respectfully maintain, therefore, that the identified features are sufficiently illustrated in the drawings as originally filed to comply with 37 C.F.R. § 1.83(a) and that no amendment or supplementation is required.

The Applicants respectfully request that this objection be reconsidered and withdrawn accordingly.

Rejections under 35 U.S.C. § 102

Claims 1 and 6-11 and 13-14 stand rejected under 35 U.S.C. § 102(b) as anticipated by Sillat’s German Patent DE 4420621 A1 (“Sillat”). The Applicants respectfully traverse this rejection for the reasons detailed below.

The Applicants respectfully contend that a fair and reasonable reading of the translation provided would not lead one of ordinary skill in the art to conclude that paths 8 and 10 are “fluid flow passages” for distribution of “cryogenic fluid” as alleged. Action at 3. Indeed, according to Sillat, the presence of fluid within passage 10 results in the closing of check valves 9 and 11. Sillat Trans., page 4, lines 29-33. Such a result will prevent lines 8 and 10 from being used to distribute any “cryogenic fluid.”

Similarly, there is no indication in Sillat that any “sensor” is actually provided in line 10 as alleged. Action at 3. Indeed, the Applicants contend that Sillat’s alleged “sensor” is simply a vessel filled with a gas, such as neon, that will condense when surrounded by the cryogenic liquid, in this instance LH2, exiting the container 1, thereby

reducing the pressure in line 13 to which it is pneumatically connected, with the pressure drop, in turn, being sensed by pneumatic contact manometer P3 at some distance removed from any cryogenic fluid or liquid in line 10. Sillat Trans., page 4, lines 31-32.

The Applicants also suggest that no teaching in Sillat has been identified as disclosing an “active component” in Sillat’s “sensor” as alleged. Action at 3. Indeed, the Applicants suggest that Sillat’s manometer 12, far from being “active,” is totally passive and simply contains a gaseous medium that will condense in the presence of cryogenic liquid 5 from the tank 1. The Applicants respectfully suggest that the only “active” component utilized in Sillat in connection with the bypass line is the pressure sensor P3, a device which is clearly not “in” bypass line 10. The Applicants also respectfully maintain that there is no pneumatic connection between Sillat’s manometer 12 and controller K as suggested. Action at 3.

The Applicants respectfully maintain, therefore, that the Action fails to establish with the requisite degree of clarity that Sillat does, in fact, teach “each and every element as set forth in the claim.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Absent the establishment of such a teaching, the present rejection cannot be maintained.

The Applicants respectfully request, therefore, that this rejection be reconsidered and withdrawn accordingly.

Rejections under 35 U.S.C. § 103

Claims 2 and 12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Sillat in view of McCulloch et al.'s U.S. Patent No. 6,016,697 ("McCulloch"). The Applicants respectfully traverse this rejection for the reasons detailed below.

As detailed above, the Applicants respectfully maintain that, contrary to the Examiner's assertion, the Action has not established that Sillat "discloses the invention substantially as claimed." Action at 4. The Applicants also respectfully maintain that the Examiner has again misinterpreted the teachings of McCulloch with regard to the function of the cited LEDs, 274, 276 and 278.

Indeed, as clearly disclosed by McCulloch, *these LEDs are simply indicators* provided on the front of controller 200 and are not used, in any fashion, to *sense* and condition or flow within the distribution lines. As noted previously, McCulloch provides:

Several LEDs are also provided on the front of the controller 200 to indicate the status of various control and alarm setpoints which are adjustable through the user interface 226. These setpoints include two alarm setpoints (HI and LO) which define maximum and minimum acceptable liquid levels within the storage tank 100, and two control setpoints (A and B) which define intermediate, or desirable liquid levels used for controlling liquid level 102 automatically through use of a fill valve 402, which is preferably a solenoid-operated valve, and liquid conduit 404 interconnecting the tank 100 with a liquid supply source, or tank 400. When the HI alarm setpoint is reached, a HI level LED 274 is illuminated. Likewise, a LO level LED 280 is illuminated when liquid level 102 reaches the LO alarm setpoint. The A level LED 276 illuminates when liquid level 102 reaches that level defined by control setpoint A, and B level LED 278 illuminates when control setpoint B is reached. When setpoint B is reached, the microcomputer 222 outputs a signal to the fill valve 402 so that the valve 402 opens to allow liquid to flow from the supply tank 400 to the storage tank 100. When the storage tank 100 has filled to the level defined by setpoint A, the fill valve 402 closes and liquid flow into the storage tank 100 ceases. A FILL LED 282 is illuminated to indicate when the solenoid-operated fill valve 402 is

open and allowing liquid to flow from supply tank 400 into the tank 100.

This automatic FILL function provided by the controller 200 can be manually overridden or disabled through the user interface 226.

McCulloch, col. 7, line 47 to col. 8, line 7 (Emphasis added).

The Applicants respectfully maintain, therefore, that McCulloch provides ***no teaching or suggestion*** with regard to either the suitability or manner in which the disclosed ***LED indicators*** could be modified to act as “an active component for determining if fluid or liquid is present in the overflow passage” as required by Applicants’ claims 2 and 12.

The Applicants respectfully contend, therefore, that the Action has failed to establish that all the claim limitations are taught or suggested by the proposed combination of references and has failed to establish any colorable motivation for making the proposed combination from within those references. The Applicants respectfully maintain, therefore, that the present Action fails to establish a *prima facie* case for the obviousness of the claimed invention, *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974), and that this rejection cannot properly be maintained on the present record.

The Applicants respectfully request, therefore, that this rejection be reconsidered and withdrawn.

Claims 3 and 4 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Sillat in view of Maric’s U.S. Patent No. 5,142,874 (“Maric”). The Applicants respectfully traverse this rejection for the reasons detailed below.

As detailed above, the Applicants respectfully maintain that, contrary to the Examiner’s assertion, the Action has not established that Sillat “discloses the invention

substantially as claimed.” Action at 4. The Applicants also respectfully suggest that the Examiner has misinterpreted the teachings of Maric with respect to the positioning and function of the cited temperature sensor 70.

As taught by Maric, temperature sensor 70 is *not* positioned in a cryogenic flow passage, but is, instead, arranged in an outlet pipe for sensing the temperature of material, specifically condensate, that has been cooled by exposure to the cryogenic fluid 28 as it passes through a pipe 22 transiting vessel 12 and the cryogenic fluid contained therein.

Maric, col. 5, line 66, to col. 6, line 6. Specifically, Maric goes on to state:

The temperature sensor 70 senses the temperature of the liquid condensate in the outlet 24 from the vessel. The temperature is preset to the optimal temperature for condensation of the vapors being treated in the heat exchanger coil 22 by introduction of the appropriate quantity of cooling medium to the interior of the vessel 10 through pipe 40. During passage of the condensable vapor through the coil 22, the interior temperature of the vessel 10 is sensed indirectly by the sensor 70 located in the outlet pipe 24. If the flow rate of condensable gases becomes sufficiently high as to cause a rise in temperature in the condensate, the temperature sensor 70 generates an electrical signal which, via controller 72, opens the solenoid valve 36 to permit further coolant to enter the vessel 10 to restore the internal temperature to the desired level, thereby to restore the temperature of condensate to the desired value. The level controller device 68 is set to its upper extent during the condenser mode and serves to prevent overfilling of the vessel 12 by coolant. In this way, the cryogenic apparatus 10 may control precisely the temperatures required to condense a wide range of vapour distillates.

Maric, col. 6, lines 41-62. The Applicants further suggest that no teaching or suggestion has been identified in Maric that would lead one of ordinary skill to a configuration in which “the active component is positioned within the hole and impinges into the through passage” of a sensor arranged in a cryogenic overflow line as recited in Applicants’ claim 4.

The Applicants respectfully contend, therefore, that the Action has failed to establish that all the claim limitations are taught or suggested by the proposed combination of references and has failed to establish any colorable motivation for making the proposed combination from within those references absent inappropriate hindsight guided solely by the Applicants’ disclosure. The Applicants respectfully maintain, therefore, that the present Action fails to establish a *prima facie* case for the obviousness of a claimed invention, *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974), and suggests that the present rejection cannot properly be maintained on the present record.

The Applicants respectfully request, therefore, that this rejection be reconsidered and withdrawn.

Claim 5 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Sillat in view of Maric and further in view of McCulloch. The Applicants respectfully traverse this rejection for the reasons detailed below.

As detailed above, the Applicants respectfully maintain that, contrary to the Examiner’s assertion and as detailed above, the Action has not established that Sillat, Maric or McCulloch, whether considered singly or in combination, can fairly be said to

“disclose the invention substantially as claimed.” Action at 5. In particular, the Applicants respectfully maintain that no teaching or suggestion has been identified in the applied references that would guide one of ordinary skill in the art to adapt McCulloch’s *LED indicators* as the active component of a sensor configured as recited in Applicants’ claims.

The Applicants respectfully request, therefore, that this rejection be reconsidered and withdrawn.

Allowable Subject Matter

The Applicants note with appreciation the Examiner’s indication, Action at 5, that claims 15 and 16 would be allowable if rewritten in independent form. Although, as indicated by the arguments presented above, the Applicants respectfully maintain that all pending claims are allowable over the applied references, the Applicants respectfully submit that claims 17 and 18 correspond to claims 15 and 16 rewritten in independent form and should, therefore, be allowed.

Comments on Response to Arguments

The Applicants respectfully contend that their citation of a foreign language reference identified in a Search Report received in a counterpart application represents the Applicants’ fulfillment of their obligations under 37 C.F.R. § 1.56, not a certification or indication as to their possession or understanding of the full disclosure of the foreign language reference. The Applicants respectfully maintain, therefore, that to the extent

that the Examiner wishes to base rejections upon such a reference, it becomes the Examiner's obligation to identify and translate both those portions of the reference that are alleged to be sufficient to support the rejection as well as those portions which are contrary or inconsistent with the purported interpretation. MPEP § 706.02(II). The Applicants respectfully maintain that they are aware of no grounds upon which such a requirement may be "traversed" and a valid rejection be maintained. To the extent that the Applicants' knowledge of this issue is deficient in some respect, the Applicants respectfully request citation to statute, regulation or MPEP guidelines that suggests or supports such a result.

The Applicants also respectfully maintain that the present Action does not provide any rebuttal to the Applicants argument with regard to the interpretation and application of McCulloch in which remote indicators are somehow transfigured to act as “sensors” in the overflow line. In light of this clear traversal of this rejection, the Applicants respectfully contend that the present Action substantially repeats the original rejection without substantively addressing the Applicants’ arguments. The Applicants, therefore, respectfully maintain that they are entitled to an answer to the substance of their arguments. MPEP § 707.07(f). Accordingly, the Applicants respectfully maintain that each of the rejections based on the present interpretation of McCulloch remains defective and should be withdrawn.

CONCLUSION


In view of the above remarks and amendments, the Applicants respectfully submit that each of the pending rejections have been addressed and overcome, leaving the present application in condition for allowance. A notice to that effect is respectfully requested.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned at the telephone number provided below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge any underpayment or non-payment of any fees required under 37 C.F.R. §§ 1.16 or 1.17, or credit any overpayment of such fees, to Deposit Account No. 08-0750, including, in particular, extension of time fees.

Respectfully submitted,

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